Comprehensive Plan Cost Table Version 13 Costs through July 28, 2017 UAD COST ESTIMATE JULY 201:	EXPENDED TO DATE POST SETTLEMENT 07/28/2017 COST TO COMPLETE REN 2017-2021	AINING TOTAL COST AT COMPLETION IN 5 YEARS	TOTAL COST AT COMPLETION WITH CONTINGENCIES	% Contingency	Cost to complete with contingency	Volume to be Removed (cu. yds)	FUNDING NEEDED 2017	FUNDING NEEDED 2018	FUNDING NEEDED 2019	FUDNING NEEDED 2020	FUNDING NEEDED 2021	SUBTOTAL FUNDING REQUIRED	2022	2023	2024	TOTAL (Cost to Complete Remaining Includes below the line LTM costs)	RFP date	Start	Finish	NOTES
		Project Compilete in 5 Years																		
1 MassDEP Funding	\$ 600,000 \$ 10	000 000 \$ 1 600 000	\$ 1,600,000	0%	\$ 1,000,000		\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000 \$	200.000 \$	1 000 000				\$ 1,000,000,00	1			2014-2021 - ETD for 3 years - Needs verification from 3/9/17 meeting - based on EPA comment
2 USACE Funding		300.000 \$ 12.200.000	\$ 13.420.000	10%	\$ 9,130,000		\$ 2,750,000	\$ 2,750,000	\$ 1,210,000 \$ 2,750,000		1 210 000 \$	9 130 000				\$ 9,130,000.00				Per Corps - \$3.9M (2014-2016), 2.5M (2017-2018) \$1.1M/yr (2019 - 2021)
2 USACE Funding 3 Pro-Serv Contract (WQWMonit)	\$ 7,500,000 \$ 12,	500,000 \$ 20,000,000	\$ 22,000,000	10%	\$ 13,750,000		\$ 2,750,000	\$ 2,750,000	\$ 2,750,000	\$ 2,750,000 \$	2,750,000 \$	13,750,000				\$ 13,750,000.00				assumes \$2.5M/yr - cost provided by Corps
4																				
5 Intertidal \$ 78,400,76					\$ -															
6 UH Intertidal	\$ - \$ 57,	266,772 \$ 57,266,772	\$ 68,720,127	20%	\$ 68,720,127			\$ 34,360,063	\$ 34,360,063	3	\$	68,720,127				\$ 68,720,126.75	12/1/2017	5/1/2018	6/1/2019	Assume work start in 3/18 and is fully funded and east and west sides done simultaneously, totaled using below two items.
7 Eastern shoreline		178,875				35,130														Costs based upon engineers estimate \$1209/yd, inc excavation, restoration, T&D -see backup
8 Western Shoreline	\$ 14,	787,897				14,437														Costs based upon engineers estimate \$1024/yd, incl excavation, restoration, T&D - see backup
9 Parcel 265	\$ 2,229,750 \$	- \$ 2,229,750	\$ 2,229,750	0%	\$ -															Not included in UAO estimate
10 PMC	\$ 6,886,700 \$	138,360 \$ 7,325,060	\$ 7,691,313	5%	\$ 460,278							-				\$ -				UAO included this with intertidal volume. CTC includes SES, T&D, restoration, demob
12 BtB	e e	278,114 \$ 278,114 918,985 \$ 918,985	\$ 1,010,884	20%	\$ 333,737 \$ 1,010,884	230					- 13						E/1/2017	3/1/2018	10/20/2010	Not Contracted. Assumes 250 cu you from Norm Street property only
13 Marsh Island \$ 3,380,45		282.220 \$ 2.282.220	\$ 2,510,442	10%	\$ 2,510,442	700					9	-				s -	4/1/2017	8/1/2017	11/1/2017	Not Contracted. Assumes 230 cu vids from North Street property only Not Contracted. Assumes 760 cubic yards & \$578/vid Work is contracted. Cost from RAP CIVOR negolisted proposal june 30 2017 - less management time
14 Aerovox	2,1	2,202,220	2,510,442	10%	\$						-	'				•	4/1/2011	0/1/2017	11/1/2011	WORK IS CONTROLLED. COST HOW KNOT TOWN REQUIRED PROPOSED FAIR STATE OF THE STATE OF
15 Aerovox Interim Cap	s . s . 4	800 000 \$ 4 800 000	\$ 6.240,000	30%	\$ 6.240,000		\$ 6.240,000					6 240 000				\$ 6.240,000,00	12/1/2017	5/1/2018	7/1/2018	No Contracted Assembly Contracting Contrac
16 Interim Cap LTM		750,000 \$ 750,000		20%	\$ 900,000		0,240,000	\$ 180,000	\$ 180.000	S 180,000 S	180,000 \$		\$ 180,000.00			\$ 900,000.00	12/1/2017	U/1/2018	7/1/2010	Not Contracted. Assumed 3 ft carbon sand cover (per Corps direction). Temporary solution does not complete final remedy.
10 III.GIIII GAP ETW	,	750,000	900,000	20%	\$ 900,000			100,000	100,000	100,000 \$	100,000 3	, /20,000	¥ 180,000.00			900,000.00	1			Not Contracted. Assumed annual benthic and sampling of cover and reporting. No replacement costs.
18 Cell 1 \$ 23,958,63	<u> </u>				š .															
19 Cell 1 Interim Remedy	\$ 1.	000,000 \$ 1,000,000	\$ 1,200,000	20%	\$ 1,200,000			\$ 1,000,000	\$ 50,000	\$ 50,000 \$	100,000 \$	1,200,000				\$ 1,200,000.00	1/1/2018	6/1/2018	6/1/2022	Niot Contracted. Assumed temporary AS/SVE for reduction of CVOCs.
20					e .															
21 Full Demob \$ 7,977,32	\$ - \$ 5,	785,460 \$ 5,785,460	\$ 7,810,370	35%	\$ 7,810,370				\$ 3,250,000	\$ 3,250,000 \$	1,310,370 \$	7,810,370				\$ 7,810,370.47	10/1/2018	1/1/2019	1/1/2023	CTC from May 2016 Jacobs proposal. Contingency based upon undefined future status and necessary improvement of Areas C and D.
22																				
Dredge & Fill LHCC \$ 39.838.60			e	0%	e															
23		-	•	U76	•															
24 Construct CAD Cell	\$ 9,563,000 \$	- \$ 9,563,000	\$ 9,563,000	0%	\$ -						\$	-								Complete - UAO costs for all work related to CAD Cell, less the \$11.3M from EPA HQ (need to verify if paid back)
25 Dredge and Fill LHCC - Jacobs 26 Pre-BV - UH & LH to LHCC Mechanical - Jacobs	\$ 14,155,772 \$ 4,663,907 \$	\$ 14,155,772 462 280 \$ 5 126 187	\$ 14,155,772 \$ 5,126,187	0%	\$ -			\$ 462.280			\$	462.280				\$ 462.279.84				complete
		462,280 \$ 5,126,187 060,000 \$ 1,060,000		0%	\$ 462,280 \$ 1,166,000			\$ 462,280		\$ 3,591,942	3					\$ 462,279.84 \$ 3,591,942.00				Work is complete, pending final invoicing. UH and LH Mech dredge - MU 25, 28, silt curtains, Moby Dick.
27 - UH & LH to LHCC Mechanical - Jacobs (37 C&D) 28 Dredge and Fill LHCC - BV	\$ 1,	060,000 \$ 1,060,000 915,983 \$ 14,915,983	\$ 1,166,000 \$ 14,915,983	10%	\$ 1,166,000 \$ 14,915,983		\$ 18,700,000			3,591,942	\$	3,591,942 18,700,000				\$ 3,591,942.00 \$ 18,700.000.00		6/1/2017	5/1/2019	One plant 120 days (37C&D), includes current Jacobs costs Per USACE Email (3/16/17) changed from \$18M to \$17M. Fixed Cost Contract estimate
29 Survey Contract - BV		700,000 \$ 700,000		0%	\$ 700,000		\$ 700,000				- 1	700,000				\$ 700,000.00			5/1/2018	Per USACE Email (3/16/17) changed from \$10M to \$17M. Pixed Cost Contract estimate Dor USACE Email (3/16/17) changed from \$90M to \$70M. Poxed on outside to Surgery Dor USACE Email (3/16/17) changed from \$90M to \$70M. Poxed on outside Departs
30 Between the Bridges Subtidal	\$ - \$ 2	573,520 \$ 2,573,520	\$ 2,830,872	10%	\$ 2,830,872	12,868	700,000	\$ 2,830,872			Š	2 830 872				\$ 2,830,872,00	5/1/2018	11/2/2018	10/29/2018	Per USACE Email (3/16/17) changed from \$800k to \$700k. Based on award to Bryant Negotated and Awarded, added fee in Rev9
31 Dredge Cleanup Passes - Jacobs	\$ 3:	380,000 \$ 3,380,000	\$ 3,718,000	10%	\$ 3,718,000	16,900		\$ 3,718,000			Š	3.718.000				\$ 3,718,000,00	2/1/2018	6/1/2018 12/1/2019	11/1/2018	10% cleanup passes, based on BV CTC
32 Cap LHCC \$ 5,780,30	\$ - \$ 5,	100,000 \$ 5,100,000	\$ 5,992,500	18%	\$ 5,992,500					\$ 5,992,500	\$	5,992,500				\$ 5,992,500.00	11/1/2018	12/1/2019	1/1/2020	
33 MU-22	S	102,720 \$ 102,720	\$ 112,992	10%	\$ 112,992	514			\$ 112,992	2	\$	112,992				\$ 112,992.00				Includes 4 inches overdredge (513.6 yds to LHCC, avg conc of removed material is 55.6 ppm)
34 MU-26	\$	990,600 \$ 990,600	\$ 1,089,660	10%	\$ 1,089,660	4,953			\$ 1,089,660)	\$	1,089,660				\$ 1,089,660.00				Includes 4 inches overdredge (4953 yds to LHCC, avg conc of removed material is 80.4 ppm)
35 MU-29	\$ 2,	565,440 \$ 2,565,440		10%	\$ 2,821,984	12,827			\$ 2,821,984		\$	2,821,984				\$ 2,821,984.00				Includes 4 inches overdredge (12827.2 yds to LHCC, avg conc of removed materia is 56.3 ppm)
36 PMC	\$ 1,	336,800 \$ 1,836,800	\$ 2,020,480	10%	\$ 2,020,480	22,684 18,427			\$ 2,020,480)	\$	2,020,480				\$ 2,020,480.00	1			Includes 4 inches overdredge (22684 yds to LHCC, avg conc of removed material is 80.4 ppm)
37 Area R	\$ 3,	3,685,440 \$ 3,685,440 196,000 \$ 2,196,000	\$ 4,053,984 \$ 2,415,600	10%	\$ 4,053,984 \$ 2,415,600	18,427			\$ 4,053,984 \$ 2,415,600		5	4,053,984 2,415,600				\$ 4,053,984.00 \$ 2,415,600.00				Includes 4 inches overdredge (18427.2 yds to LHCC, avg conc of removed material is 101.6 ppm)
38 Area L	\$ 2,	196,000 \$ 2,196,000	\$ 2,415,600	10%	\$ 2,415,600	10,980			\$ 2,415,600)	3	2,415,600				\$ 2,415,600.00	'			Includes 4 inches overdredge (10980.2 yds to LHCC, avg conc of removed material is 98.3 ppm)
39										-										CUBIC YARDS TO LHCC - 70385.2
41 Hydraulic Dredging \$ 154,456,09	\$ 51,365,786 \$	- \$ 51,365,786	\$ 51,365,786	0%	٠						- 3									2014 through 2016 dredging less \$12M, PMC, Parcel 265, and fixed costs
42 Temporary Pipeline Relo		235,659 \$ 1,235,659		0%	\$ 1,235,659						S					s -				ZOTE BROUGH ZOTO GREGGING BESS \$12M, FINO, FINO, FINO, BUT BROUGH ZOOSES Negotated and Awarded
43 Capping DDA	s - s	- S	\$ -	20%	\$ -						\$	-				\$ -				Capping of DDA cost estimated from ESD 4
44 Sand Cover		925,000 \$ 2,925,000	\$ 3,217,500	10%	\$ 3,217,500				\$ 3,217,500		\$	3,217,500				\$ 3,217,500.00				This is an assumed volume of 100,000 cy, mechanical placement - ASSUMES ONLY 25% COVER USED - ORIGINALLY \$11.7 AND 12.87 W/C
45 Maintenance of Salt Marsh Restoration	\$	500,000 \$ 500,000		10%	\$ 550,000			\$ 275,000		\$	275,000 \$	550,000				\$ 550,000.00				Year 1 after restoration and Year 5 - Not previously included.
46 LHCC O&M \$ 580,16		889,052 \$ 689,052	\$ 723,504	5%	\$ 723,504					\$ 80,000 \$	80,000 \$	160,000	\$ 80,000.00		\$ 80,000.00	\$ 320,000.00				Cost to Complete is escalated UAO cost (3.5%)
		579,290 \$ 579,290		0%	\$ 579,290				\$ 579,290		\$	579,290	\$		\$ 579,289.63	\$ 1,158,579.26				Costs from MassDEP
48 Site Wide Benthic LTM \$ 818,70 49 Fixed Costs \$ 54,927.51		550,000 \$ 1,086,021	\$ 1,140,322	5%	\$ 577,500				\$ 577,500			577,500	\$	577,500.00		\$ 1,155,000.00				Cost to Complete is escalated UAO cost (3.5%), assume 1/5yr
49 Fixed Costs \$ 54,927,51 50 Project Management and Admin		905,128 \$ 24,998,130	\$ 27 497 943	10%	\$ 8,695,641		\$ 579,709	\$ 1,739,128.12	\$ 1 739 128 12	2 \$ 1,739,128.12 \$	1,739,128.12 \$	7,536,222	\$ 666,126.30			\$ 8,202,348.13				Jacobs Fixed Costs,
50 Project Management and Admin 51 Site Ops and Warehouse		917,648 \$ 6,784,626	\$ 7,463,089	10%	\$ 4,309,412		\$ 287,294	\$ 1,739,126.12	\$ 1,739,126.12		861,882.47 \$	3 734 824	\$ 484,598.10			\$ 6,202,346.13 \$ 4,219,422.12				
52 Air Monitoring		384,741 \$ 2,461,763		10%	\$ 1,523,216		. 201,254	\$ 304,643	\$ 304,643		304,643 \$	3,734,824 1,218,572	\$ 168.485.39			\$ 1,387,057.84				Air Monitoring for 2017 is funded.
53 Hybrid Dedging		2, 31,100	2,,000		.,,210													•	•	
54 Cable Crossing	\$ 25,	746,215 \$ 25,746,215		10%	\$ 28,320,837															Based on initial proposal for TOM4 (55,000 v/sb), revised - see subtidal back up - includes Mobivinterization-already funded Includes a funches overdedge (2890.5 ysb, any conc of removed material is 266.5 ppm) Includes 4 inches overdedge (1400.3 ysb, any conc or fermoved material is 187.2 ppm) Includes 4 inches overdedge (1691.9 ysb, any conc or fermoved material is 187.2 ppm) Includes 4 inches overdedge (1691.9 ysb, any conc or fermoved material is 187.2 ppm) Max conc exceed 700 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, any conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, any conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, any conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, any conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, any conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, any conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, and conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, and conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, and conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1691.7 ysb, and conc or fermoved material is 36.4 ppm) Max conc exceed (1,900 ppm in some samples Includes 4 inches overdedge (1,900 ppm in some samples (1,900 ppm in some samples)
55 Area O	\$ 15,	993,352 \$ 15,093,352 198,882 \$ 7,198,882	\$ 16,602,687	10%	\$ 16,602,687	29,361		\$ 16,602,687			S	16,602,687				\$ 16,602,687.46	11/1/2017	3/19/2018	5/28/2018	Includes 4 inches overdredge (29360.5 yds, avg conc of removed material is 266.5 ppm)
56 Area N			\$ 7,918,770 \$ 9,567,305	10%	\$ 7,918,770 \$ 9,567,305	14,004		\$ 7,918,770			\$	7,918,770				\$ 7,918,770.26	11/1/2017	6/4/2018	7/10/2018	Includes 4 inches overdredge (14003.7 yds, avg conc of removed material is 113.3 ppm)
57 Area H		397,550 \$ 8,697,550		10%		16,919		\$ 9,567,305			\$	9,567,305				9,567,305.36	11/1/2017	//11/2018	8/17/2018	includes 4 inches overgredge (16919 yds, avg conc of removed material is 187.2 ppm)
58 Area I 59 Area P	\$ 3,	581,988 \$ 3,581,988 747,005 \$ 3,747,005	\$ 3,940,187 \$ 4.121,705	10%	\$ 3,940,187 \$ 4,121,705	6,968 7,289		\$ 3,940,187 \$ 4,121,705			5	3,940,187 4,121,705				\$ 3,940,187.19	11/1/2017	8/20/2018	9///2018	includes 4 incres overdreuge (osor s yos, ayg conclor removed materials is 5.1 ppm) Max conclexiced in Charles among samples lookulged A lephan graphed to Charles and a conclusion of the concl
60 Area S	\$ 3,	747,005 \$ 3,747,005 077,057 \$ 10,077,057		10%	\$ 4,121,705 \$ 11,084,763	7,289 19,603		\$ 4,121,705 \$ 11,084,763			3	11,084,763				\$ 4,121,705.31	11/1/2017	9/10/2018	11/9/2018	Includes 4 inches overvieruge (7200.5 yds), avg conc or removed material is 50.4 ppm) max conc exceed 1,500 ppm in 50me Samples Includes A inches overvierung (720.75 yds), avg conc of removed material is 75.3 ppm) Max conc exceed 500 ppm is come complex
61 Areas T & T'	\$ 11	542,210 \$ 1,542,210	\$ 1,696,431	10%	\$ 1,696,431	3.000		\$ 1,696,431			S	1,696,431				\$ 1,696,431.00	11/1/2017	11/12/2018	11/19/2018	Assumes 3000 cubic varies
62 MU-31		339,101 \$ 1,339,101		10%	\$ 1,473,011	2,605		\$ 1,473,011			S	1,473,011				\$ 1,473,011.04	11/1/2017	11/20/2018	11/25/2018	Includes 4 inches overlede (pt 1902 by 5 w.g., and conc of removed material is 35 ppm) Max core creeded 500 ppm in some samples Assumes 3000 colic years Includes 4 inches overdeded (pt 1902 by 5 w.g., and conc of removed material is 7.5 ppm) Max core creeded 500 ppm in some samples Assumes 3000 colic years Includes 4 inches overdeded (pt 2004 by 4), and conc of removed material is 35 ppm) Max core deceded 400 ppm in some samples
																				99,747
SUBTOTAL \$ 370,839,93	\$ 122,437,937 \$ 231,	598,572 \$ 354,036.509	\$ 387,556,364		\$ 261,503,591		\$ 32,207,004	\$ 107,836,729	\$ 61,794,707	\$ 20,210,096 \$	9,011,024 \$	231,059,559	\$ 1,579,209.79 \$	577,500.00	\$ 659,289.63	\$ 233,875,558.92				
SETTLEMENT AMOUNT		\$ 366,250,000	\$ 366,250,000		s															
ZZ. ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ					-															
INTEREST		\$ 5,000,000	\$ 5,000,000		\$															EPA assumption, correct interest rates and values to be provided, per EPA \$2M in avail. Funding but not in contingency.
MassDEP Payment for LTM		\$ 1,500,000	\$ 1,500,000																	
Remaining funding		\$ 15.713.491	\$ (17.806.364)																	
		10,713,481	. (17,000,304)																	
DECEMBED EXPENSES																				
DEFERRED EXPENSES Assurant Society Removal	¢ . ¢ 10	327,241 \$ 18,627,241	\$ 27,940,861	50%	\$ 27,940,861															
Aerovox Sediment Removal	- 9 18)	221,221	¥ 21,840,001	3076	e 21,540,001		t	+		 	-		¢ 260,000.00 ¢	E77 E00 00	¢ 650 390 00	\$ 1.496.789.63		+	1	USO ON Cartest and Durbin
LTM Costs after 2021		781.530 \$ 1.781.530	ė 04	2007	0		1						\$ 260,000.00 \$	577,500.00	\$ 659,289.63	ø 1,490,789.63	+	+	+	LHCC O&M, Seafood and Benthic
Capping DDA \$ 1,781,53	- 3 1,	781,530 \$ 1,781,530	\$ 2,137,836	20%	\$ 2,137,836		 	-					-				-	+	1	Included in Cells #123 Final Remedy.
Costs to remove Government Owned Property	 				1.		 	-					-				-	+	1	Cost estimate requires Government Property List and direction for disposal or reuse.
Cells 1,2, 3 Final Remedy - no mixed waste	l	\$ 16,613,069		30%	\$ 21,596,990		 	-					-				-	+	1	
Cells 1, 2, 3 Final Remedy		969,595 \$ 22,969,595	\$ 29,860,474	30%	\$ 29,860,474		1										1	-	+	Includes \$1,781,530 to cap the DDA. Includes \$1,781,530 to cap the DDA.
TOTAL DEFERRED EXPENSES	\$ 43,	378,366 \$ 59,991,435	\$ 81,536,161		\$ 81,536,161		1										1			includes \$1,761,550 to cap title DDA.